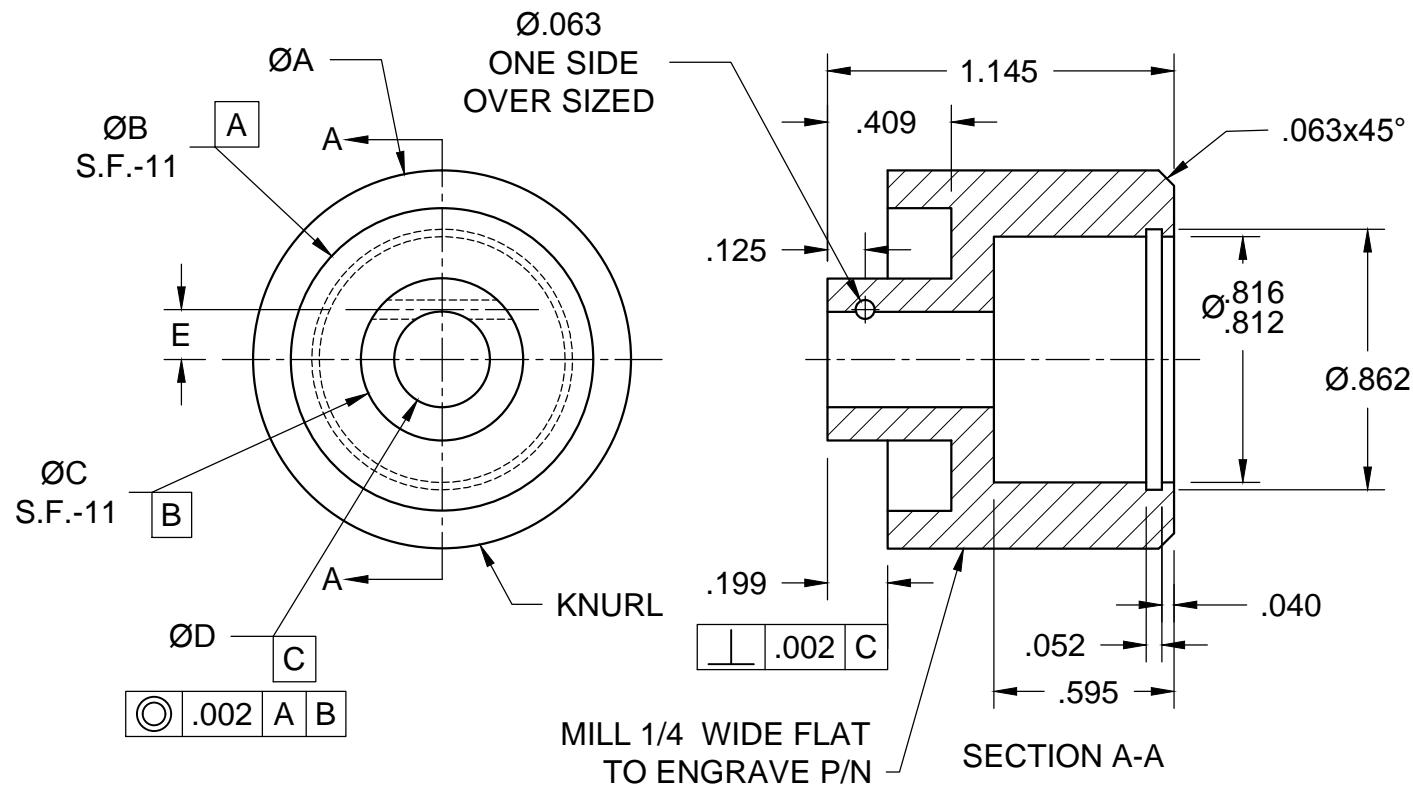


BEARING # BACB10	TOOL #	A	MATERIAL
FBO4-AMT	KSTFB04P	#10-24 UNC	4140 Q&T RND. BAR Ø7/8 x 7/8
FBO6	KSTFB06P	#1/4-20 UNC	4140 Q&T RND. BAR Ø7/8 x 7/8
FBO7	KSTFB07P	#1/4-20 UNC	4140 Q&T RND. BAR Ø7/8 x 7/8

RB RED BARN MACHINE		
TITLE KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS		
DWG NO.	REV 2	
TOOL #(see chart)-15 TENSIONER		
UNLESS OTHERWISE SPECIFIED		
DIMENSIONS ARE IN INCHES		
TOLERANCES ON:		
DECIMALS		
XXX $\pm$ .005	FRACTIONS $\pm$ 1/32	
XX $\pm$ .01	ANGLES $\pm$ 5°	
X $\pm$ .1		
APPROVED		
HEAT TREAT		
FINISH SPEC	BLACK OXIDE	
USED ON BEARING		
SEE CHART		
UNLESS OTHERWISE SPECIFIED		
1. BREAK ALL SHARP EDGES .015 x 45° PR. .015 R		
2. DIMENSIONAL LIMITS APPLY AFTER PLATING		
SCALE NTS	DATE 3-21-08	SHEET 9 of 9

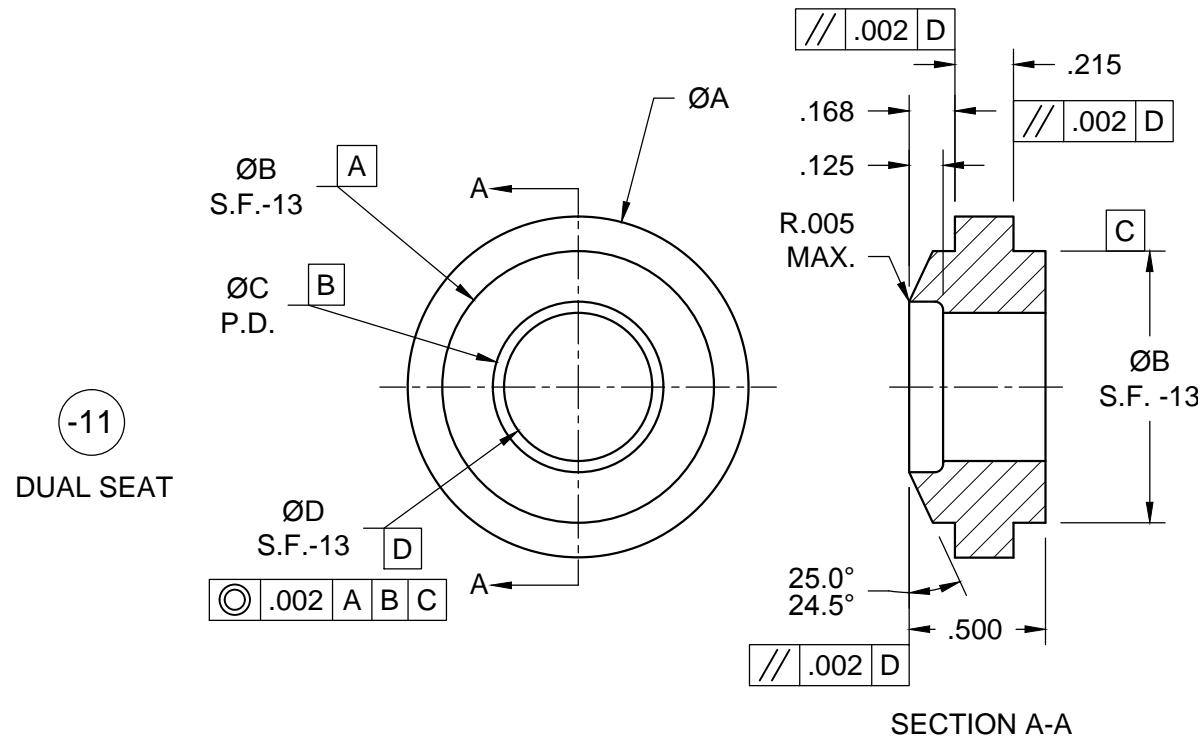
-13

RECIEVER

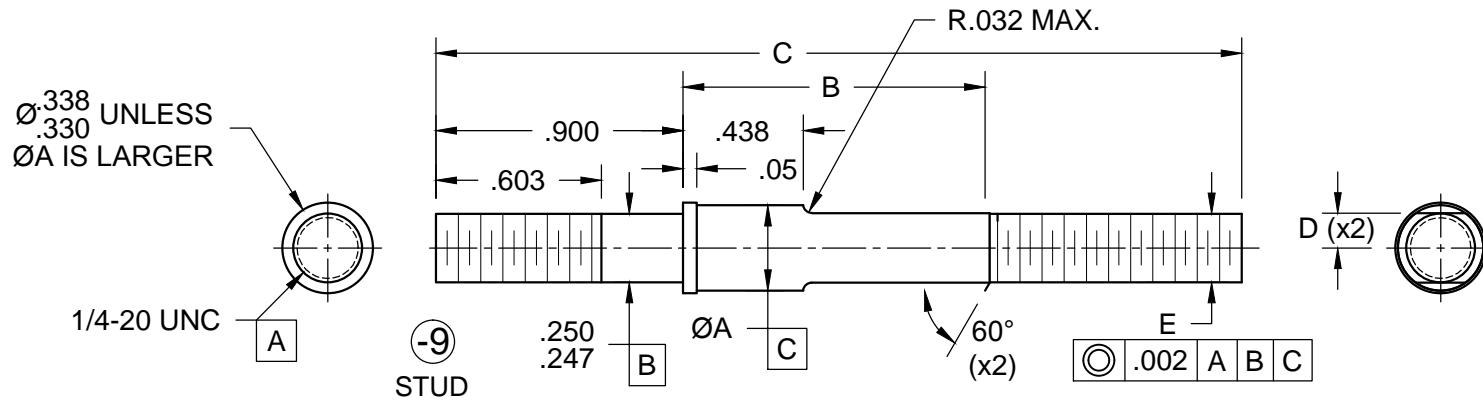


BEARING # BACB10	TOOL #	ØA +.010 -.010	ØB +.005 -.000	ØC +.000 -.003	ØD +.002 -.000	E +.003 -.003	MATERIAL
FBO4-AMT	KSTFB04P	1.250	1.000	.536	.252	.136	4140 Q&T RND.BAR Ø1-1/4 x 1-1/4
FBO6	KSTFB06P	1.500	1.150	.689	.375	.195	4140 Q&T RND.BAR Ø1-1/2 x 1-1/4
FBO7	KSTFB07P	1.500	1.150	.689	.438	.226	4140 Q&T RND.BAR Ø1-1/2 x 1-1/4

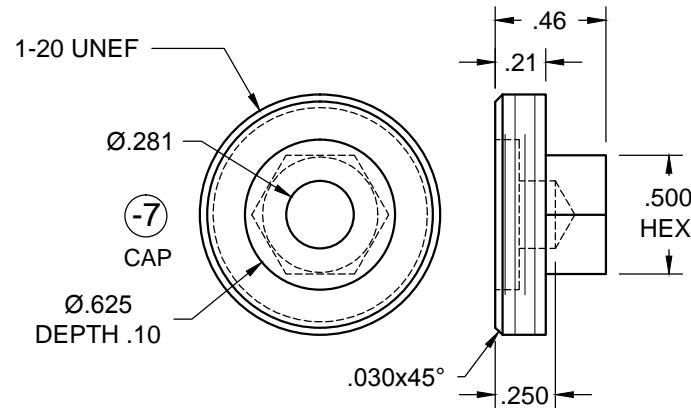
RB RED BARN MACHINE	
TITLE KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO. TOOL#(see chart)-13 RECIEVER	
REV 2	
UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
TOLERANCES ON:	
DECIMALS	FRACTIONS $\pm 1/32$
XXX $\pm .005$	
XX $\pm .01$	ANGLES $\pm .5^\circ$
APPROVED	
HEAT TREAT	
FINISH SPEC BLACK OXIDE	
USED ON BEARING	
SEE CHART	
SCALE NTS	DATE 3-21-08
SHEET 8 of 9	



 RED BARN MACHINE		
TITLE	KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO.	TOOL#(see chart)-11 DUAL SEAT	REV 2
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS $.005 \pm .005$ $.01 \pm .01$ $.1 \pm .1$		DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH SPEC BLACK OXIDE USED ON BEARING SEE CHART
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES $.015 \times 45^\circ$ PR. 015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		
SCALE	NTS	DATE 3-21-08 SHEET 7 of 9



 <b>RED BARN MACHINE</b>	
<b>TITLE</b>	KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS
<b>DWG NO.</b>	TOOL#(see chart)-9 STUD
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS $.XXX \pm .005$ FRACTIONS $\pm 1/32$ $.XX \pm .01$ ANGLES $\pm .5^\circ$ $.X \pm .1$	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES $.015 \times 45^\circ$ PR. 015 R. 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
<b>SCALE</b>	NTS
<b>DATE</b>	3-21-08
<b>SHEET</b>	6 of 9
<b>DRAWN BY:</b>	PERRITT
<b>APPROVED</b>	
<b>HEAT</b>	
<b>TREAT</b>	
<b>FINISH</b>	
<b>SPEC</b>	BLACK OXIDE
USED ON BEARING	

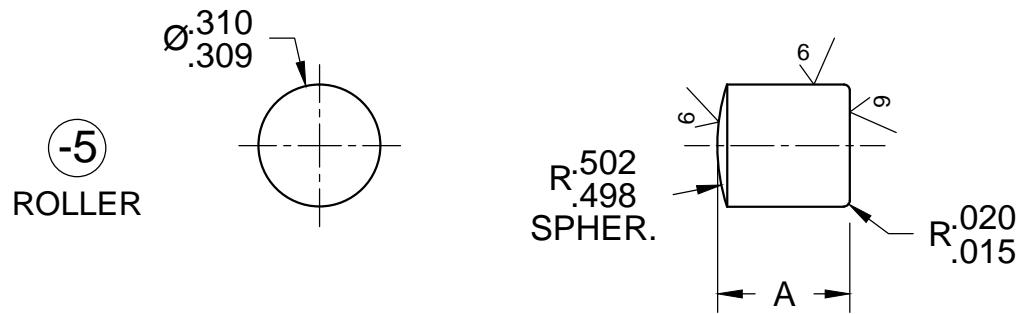


### NOTES

1. NOT USED WITH RIGHT ANGLE ATTACHMENT KSTRA101.

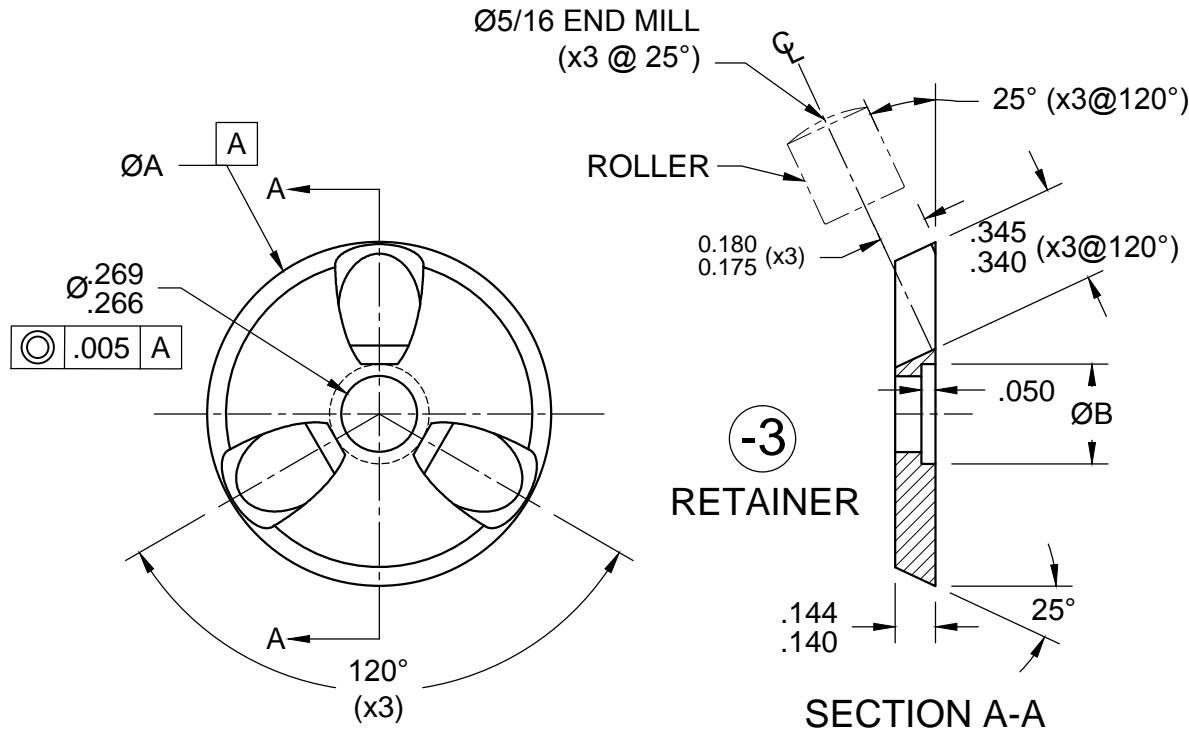
BEARING #	TOOL #	MATERIAL
BACB10		
FBO4-AMT	KSTFB04P	1018 RND. BAR Ø1 x 5/8
FBO6	KSTFB06P	1018 RND. BAR Ø1 x 5/8
FBO7	KSTFB07P	1018 RND. BAR Ø1 x 5/8

 RED BARN MACHINE	
TITLE KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO. TOOL#(see chart)-7 CAP REV 2	
UNLESS OTHERWISE SPECIFIED DRAWN BY: PERRITT	
DIMENSIONS ARE IN INCHES	
TOLERANCES ON: APPROVED	
DECIMALS: HEAT TREAT	
XXX ± .005 FRACTIONS ± 1/32	
XX ± .01 ANGLES ± 5°	
X ± .1	
UNLESS OTHERWISE SPECIFIED	
1. BREAK ALL SHARP EDGES	
.015 x 45° PR. .015 R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE	NTS
DATE	3-21-08
SHEET 5 of 9	



BEARING # BACB10	TOOL #	A $+.001$ $-.001$	MATERIAL	
FBO4-AMT	KSTFB04P	.335	.310 MINUS GAUGE PIN	MSC #89031009
FBO6	KSTFB06P	.335	.310 MINUS GAUGE PIN	MSC #89031009
FBO7	KSTFB07P	.335	.310 MINUS GAUGE PIN	MSC #89031009

RED BARN MACHINE	
TITLE KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO.	TOOL#(see chart)-5 ROLLER
REV	2
UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
TOLERANCES ON:	
DECIMALS	
XXX	± .005
XX	± .01
X	± .1
FRACTIONS ± 1/32	
ANGLES ± 5°	
APPROVED	
HEAT	RC 55-60
TREAT	
FINISH	
SPEC	
USED ON BEARING	
SEE CHART	
SCALE	NTS
DATE	3-21-08
SHEET	4 of 9

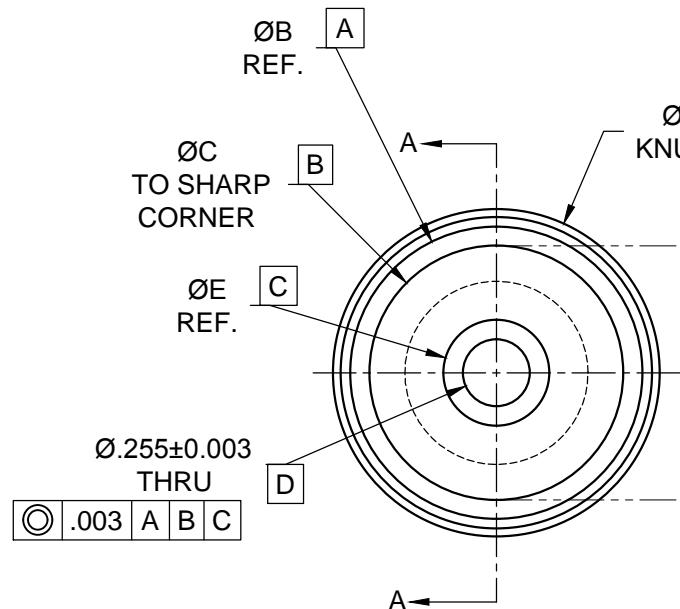


NOTES

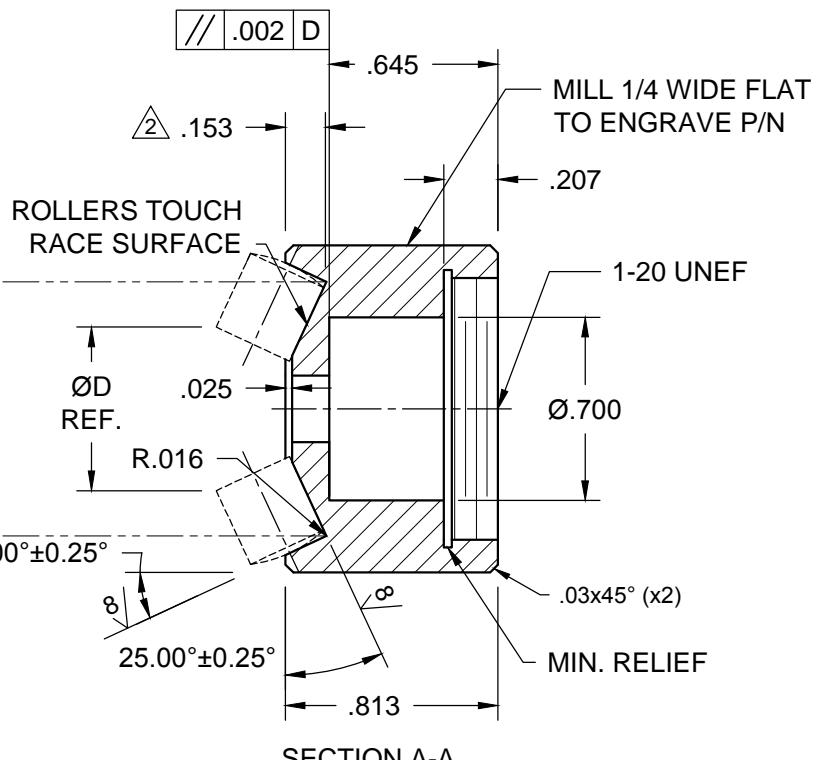
1. BREAK ALL SHARP CORNERS (.015/.03).

BEARING # BACB10	TOOL #	ØA +.002 -.002	ØB +.010 -.000	P.D. REF.	MATERIAL
FBO4-AMT	KSTFB04P	1.199	.350	.617	BRONZE RND. BAR Ø1-1/4 x 3/8
FBO6	KSTFB06P	1.372	.438	.775	BRONZE RND. BAR Ø1-1/2 x 3/8
FBO7	KSTFB07P	1.497	.500	.900	BRONZE RND. BAR Ø1-5/8 x 3/8

RB RED BARN MACHINE	
TITLE KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO. TOOL#(see chart)-3 RETAINER REV 2	
UNLESS OTHERWISE SPECIFIED DRAWN BY: PERRITT	
DIMENSIONS ARE IN INCHES	
TOLERANCES ON: APPROVED	
DECIMALS HEAT TREAT	
XXX $\pm$ .005	FRACTIONS $\pm$ 1/32
XX $\pm$ .01	ANGLES $\pm$ 5°
X $\pm$ .1	
UNLESS OTHERWISE SPECIFIED USED ON BEARING	
1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R SEE CHART	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	DATE 3-21-08
SHEET 3 of 9	



(-1)  
BASE



SECTION A-A

NOTES

1. BREAK ALL SHARP CORNERS (.015/.03).

2. DIMENSION TO BOTTOM OF R.016=.153;  
DIMENSION TO SHARP CORNER=.158.

3. RACE SURFACE OF -1 BASE MUST BE  
SMOOTH AND FREE OF GROOVES &  
MACHINING MARKS.

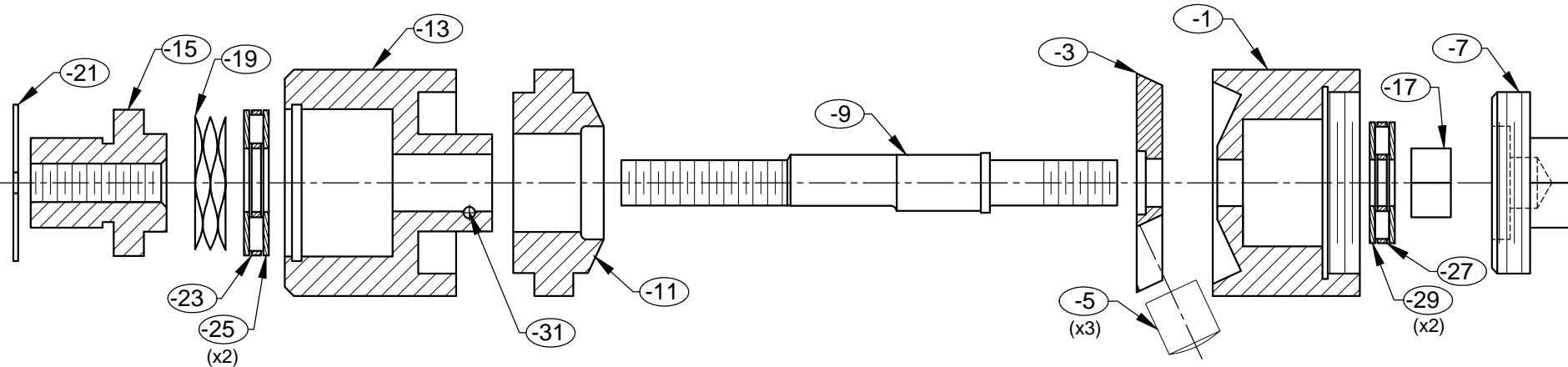
4. MUST HOLD ØC POSITION AND ANGLE  
TOLERANCES TO MAINTAIN PITCH DIA..

5. DO FIRST ARTICLE INSPECTION  
BEFORE HEAT TREATING.

BEARING #	TOOL #	ØA +.010 -.010	ØB +.006 -.002	ØC +.006 -.002	ØD P.D. REF.	ØE +.006 -.002	MATERIAL
BACB10							
FBO4-AMT	KSTFB04P	1.250	1.109	.963	.617	.397	O-1 DRILL ROD Ø1-1/4 x 1
FBO6	KSTFB06P	1.500	1.267	1.121	.775	.555	O-1 DRILL ROD Ø1-1/2 x 1
FBO7	KSTFB07P	1.500	1.392	1.246	.900	.680	O-1 DRILL ROD Ø1-1/2 x 1

<b>RB RED BARN MACHINE</b>	
TITLE KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO. TOOL#(see chart)-1 BASE REV 2	
UNLESS OTHERWISE SPECIFIED DRAWN BY: PERRITT	
DIMENSIONS ARE IN INCHES	
TOLERANCES ON: APPROVED	
DECIMALS: XXX ± .005 FRACTIONS ± 1/32	
XX ± .01 ANGLES ± .5°	
X ± .1	
HEAT TREAT RC 55-60	
FINISH SPEC BLACK OXIDE	
USED ON BEARING	
SEE CHART	
SCALE	NTS
DATE	3/21/08
SHEET 2 of 9	

REVISIONS			DATE	INITIAL	APPROVED
REV	DESCRIPTION				
1	CHANGED -5 ROLLER RADUIS FROM .005 - .010, TO .015 - .020. -3 END MILL DEPTH ENLARGED FROM .329 ±.005 FOR ROLLER CLEARANCE.		7/7/08	WP	DW
2	ADDED FB07P & FB06P TOOLS, SHORTENED 04AMT-9 FROM 2.840 & CHANGED ITS ØE TO A THREAD LENGTH REFERENCE, ALSO ADDED .03x45° TO -1.		10/17/08	WP	



#### NOTES

1. FLAT END OF -5 ROLLERS MUST FACE THE CENTER OF TOOL WHEN ASSEMBLED.
2. TIGHTEN -17 LOCK NUT UNTIL -3 RETAINER HAS .004 CLEARANCE OF -5 ROLLERS. -5 ROLLERS AND -3 RETAINER MUST TURN SMOOTHLY ON -1 BASE WHEN ASSEMBLED.

ASSY QTY	ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	MAT.	B/O INFORMATION OR SPECIFICATIONS	Pg.
			-1	1	BASE		SEE CHART	2
			-3	1	RETAINER		SEE CHART	3
			-5	3	ROLLER		SEE CHART	4
			-7	1	CAP		SEE CHART	5
			-9	1	STUD		SEE CHART	6
			-11	1	DUAL SEAT		SEE CHART	7
			-13	1	RECEIVER		SEE CHART	8
			-15	1	TENSIONER		SEE CHART	9
B/O		-17	1		DISTORTED THREAD LOCK NUT		1/4-20 UNC x 7/32 Ht. MCMASTER-CARR #95065A150	1
B/O		-19	1		CREST TO CREST FLAT WIRE WAVE SPRING	STEEL	.750 OD., .550 ID., WIRE THICK. .013, THREE TURNS SMALLEY RING CO. #CS075-H1	1
B/O		-21	1		INTERNAL SNAP RING	STEEL	Ø7/8 BORE MCMASTER-CARR #99142A410	1
B/O		-23	1		THRUST BEARING (SPRING SIDE)	STEEL	Ø3/8 ID. x 13/16 OD. x 5/64 WIDTH APPLIED (TIMKEN #NTA-613)	1
B/O		-25	2		BEARING WASHER	STEEL	Ø3/8 ID. x 13/16 OD. x 1/32 WIDTH APPLIED (TIMKEN #TRA-613)	1
B/O		-27	1		THRUST BEARING	STEEL	Ø1/4 ID. x 11/16 OD. x 5/64 WIDTH APPLIED (TIMKEN #NTA-411)	1
B/O		-29	2		BEARING WASHER	STEEL	Ø1/4 ID. x 11/16 OD. x 1/32 WIDTH APPLIED (TIMKEN #TRA-411)	1
B/O		-31	1		ROLL PIN	STEEL	Ø1/16 x 3/8	N/S

BEARINGS & TOOLS COVERED	
BEARING #	TOOL #
BACB10FB04-AMT	KSTFB04P
BACB10FB06	KSTFB06P
BACB10FB07	KSTFB07P
BACB10	
BACB10	
BACB10	

RB RED BARN MACHINE	
TITLE KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO.	SEE CHART ABOVE FOR TOOL #
	REV 2
UNLESS OTHERWISE SPECIFIED	DRAWN BY: PERRITT
DIMENSIONS ARE IN INCHES	APPROVED
TOLERANCES ON:	HEAT TREAT SEE PART
DECIMALS	FINISH SPEC SEE PART
XXX ± .005	FRACTIONS ± 1/32
XX ± .01	ANGLES ± .5°
X ± .1	USED ON BEARING
UNLESS OTHERWISE SPECIFIED	SEE CHART
1. BREAK ALL SHARP EDGES	
.015 x 45° PR. .015 R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	

SCALE NTS DATE 3/21/08 SHEET 1 of 9

REVISIONS			
REV	DESCRIPTION	DATE	INITIAL APPR
—	—	—	—

NOT APPROVED FOR PRODUCTION

ASSY QTY	ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	MAT.	B/O INFORMATION OR SPECIFICATIONS	Pg.	TITLE					
			-1	1	RND	6061	Ø8-1/4 x 3-7/8	2	— —					
									DWG NO. — — RE					
									UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES					
									DRAWN BY: PERRITT					
									APPROVED					
									HEAT TREAT FINISH SPEC					
									USED ON MODEL					
ASSY #									SCALE	NTS	DATE	8-15-07	SHEET	1 of

NOT APPROVED FOR PRODUCTION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

PART #	QTY	DESCRIPTION
-1	1	--

DRAWN BY: PERRITT	TITLE RED BARN MACHINE
CHECKED	
HEAT	
TREAT	
FINISH SPEC	
USED ON MODEL ?	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX $\pm$ .005      FRACTIONS $\pm$ 1/32 .XX $\pm$ .01      ANGLES $\pm$ 5° .X $\pm$ .1
DWG NO.	PART #
SCALE NTS	DATE 1-28-06
REV.	SHEET 1 of 1